



IN THE CLAIMS:

The following is a listing of the present claims in the application with claims 1 and 9 shown as currently amended:



LISTING OF CLAIMS:

1. (Currently Amended) A motor drive circuit having a plurality of transistors, comprising:

a first transistor;

a second transistor whose collector is connected to an emitter of said first transistor in series;

a motor connected to a connection point between said first and second transistors;

a drive circuit connected to the base of each of said plurality of transistors to control said motor through said plurality of transistors; and

a short brake circuit connected to said drive circuit and also to the base of each of said first and second transistors independent of said drive circuit,

wherein said short brake circuit includes:

a first brake control circuit that outputs a signal to said drive circuit so as to cause said drive circuit to turn off said first transistor and to turn on said second transistor in accordance with a brake operation instruction signal; and

a second brake control circuit that forces connected to the base of said first transistor so as to cause said first transistor to be turned OFF off by drawing current from the base of said first transistor in accordance with the said brake operation instruction signal independently from independent of from said first brake control circuit.

2. (Original) The motor drive circuit as claimed in claim 1, wherein the first transistor controls supplying of a drive current to the motor, and the second transistor controls drawing of the drive current from the motor.

3. (Original) The motor drive circuit as claimed in claim 2, wherein the first and second transistors are each formed by an NPN transistor, and the second brake control circuit lowers a base potential of said first transistor.

4. (Original) The motor drive circuit as claimed in claim 3, wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors and the motor and a base of the first transistor; and

a control circuit that turns ON said switching element in accordance with the brake operation instruction signal.

5. (Original) The motor drive circuit as claimed in claim 2, wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors and the motor and a base of the first transistor; and

a control circuit that turns ON said switching element in accordance with the brake operation instruction signal.

6. (Original) The motor drive circuit as claimed in claim 1, wherein the first and second transistors are each formed by an NPN transistor, and the second brake control circuit lowers a base potential of said first transistor.

7. (Original) The motor drive circuit as claimed in claim 6, wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors and the motor and a base of the first transistor; and

a control circuit that turns ON said switching element in accordance with the brake operation instruction signal.

8. (Original) The motor drive circuit as claimed in claim 1, wherein the second brake control circuit includes:

a switching element provided between the connection point between the first and second transistors and the motor and a base of the first transistor; and

control circuit that turns ON said switching element in accordance with the brake operation instruction signal.

9. (Currently Amended) motor drive method applied to a motor drive circuit in which a motor is connected to a connection point between a first transistor and a second transistor, and an emitter of said first transistor and a collector of said second transistor are connected in series, said motor drive method comprising:

turning OFF said first transistor and turning ON said second transistor by a first brake control circuit in accordance with a brake operation instruction signal, and simultaneously forcing said first transistor to be turned OFF by a second brake control circuit ~~in accordance with the brake operation instruction signal~~ independent of the operation of said first brake control circuit and before said first transistor is turned OFF by said first brake control circuit in accordance with the brake operation signal.

10. (Original) The motor drive method as claimed in claim 9, wherein the first transistor controls supplying of a drive current to the motor, and the second transistor controls drawing of the drive current from the motor.

11. (Original) The motor drive method as claimed in claim 10, wherein the first and second transistors are each formed by an NPN transistor, and the step of forcing the first transistor to be turned OFF is performed by lowering a base potential of the first transistor.

12. (Original) The motor drive method as claimed in claim 11, wherein the step of forcing the first transistor to be turned OFF is performed by turning ON a switching element that is provided between the connection point between the first and second transistors and the motor and a base of the first transistor in accordance with the brake operation instruction signal.

13. (Original) The motor drive method as claimed in claim 10, wherein the step of forcing the first transistor to be turned OFF is performed by turning ON a switching element that is provided between the connection point between the first and second transistors and the motor and a base of the first transistor in accordance with the brake operation instruction signal.

14. (Original) The motor drive method as claimed in claim 9, wherein the first and second transistors are each formed by an NPN transistor, and the step

of forcing the first transistor to be turned OFF is performed by lowering a base potential of the first transistor.

15. (Original) The motor drive method as claimed in claim 14, wherein the step of forcing the first transistor to be turned OFF is performed by turning ON a switching element that is provided between the connection point between the first and second transistors and the motor and a base of the first transistor in accordance with the brake operation instruction signal.

16. (Original) The motor drive method as claimed in claim 9, wherein the step of forcing the first transistor to be turned OFF is performed by turning ON a switching element that is provided between the connection point between the first and second transistors and the motor and a base of the first transistor in accordance with the brake operation instruction signal.

17. (Previously Presented) A motor drive circuit, comprising:

a first transistor;

a second transistor having a collector connected to an emitter of said first transistor in series;

a motor connected to a connection point between said first and second transistors;

a first brake control circuit that controls said motor by turning OFF said first transistor and turning ON said second transistor in accordance with a brake operation instruction signal; and

a second brake control circuit that controls said motor by forcing said first transistor to be turned OFF before the first transistor is actually turned OFF by said first brake control circuit.

18. (Previously Presented) The motor drive circuit as claimed in claim 17, wherein said first transistor controls a drive current supplied to said motor, and said second transistor controls the drive drawn from said motor.

19. (Previously Presented) The motor drive circuit as claimed in claim 18, wherein the first and second transistors are each formed by an NPN transistor, and the scone brake control circuit lowers a base potential of said first transistor.

20. (Previously Presented) The motor drive circuit as claimed in claim 19, wherein said second control circuit includes:

a switching element provided between the connection point between said first and second transistors; and

a control circuit that turns ON said switching element in accordance with the brake operation instruction signal.